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THE TREATMENT OF CHANCRES.

BY DR. WILLIAM G. PORTER.

Read at a Conversational Meeting of the Philadelphia County Medical Society, held November 22d, 1876.

By the word chancre, as used in this paper, we desire to be understood the initial lesion of syphilis, the first local sign of a constitutional disease whose influence may affect the health and blight the happiness, not only of individuals but of generations.

And first, without discussing the theories of unity and duality, or investigating any of the vexed questions of this disorder, let us ask ourselves, is it a clinical fact that any one symptom or group of symptoms is uniformly or almost uniformly followed by what are generally considered to be the symptoms of constitutional syphilis.

It is not many years since all ulcers not herpetic or traumatic, occurring on the generative organs, and even gonorrhoea, were considered to be syphilitic, and were treated by the internal administration of mercury, and that in very large doses, when no constitutional manifestations followed; this good effect was ascribed solely to the heroic treatment which the patient had undergone. But clinical experience in cases which had never been treated at all soon proved to the close observer that many ulcers on the genitals, undoubtedly of venereal origin, were merely local in their effects, and were not followed by constitutional contamination. Continued experience and renewed investigation, with the effects of artificial

inoculation, have proved that one variety of sore is almost certainly followed by constitutional manifestations. To this variety the names of chancre, hard sore, infecting chancre, and initial lesion of syphilis, have been given. Let us investigate briefly its history and appearance.

It is always due to contagion from the secretion of a chancre, syphilitic lesion, or from the blood of a person affected with syphilis. It makes its appearance at a period varying from ten days to six weeks, usually, however, from two to three weeks, after the suspicious intercourse or other means of inoculation. It presents itself in three forms: First, in that of a cup-shaped cavity or ulcer on an indurated base. Second, in that of a shallow abrasion or excoriation, commonly of an ash-gray or livid color, also on an indurated base; and Third (very rarely), in that of a deposit of well-defined induration on unbroken skin; from the two former a serous ichor exudes; from the last there is no moisture, because there is no ulceration. This induration may appear with the chancre or affect the sore at a varying period after its first appearance. It is almost always present during the first week, and Bumstead says that if it does not appear by the third week he should regard his patient as safe. It is firm, cartilaginous, circumscribed, movable upon the neighboring tissues, terminating abruptly, not shading off into the parts around, almost insensitive to pressure, movable on the parts beneath the skin, and not adherent to the latter. Sometimes it is thin, resembling a layer of parchment, or again, annular, and is generally persistent for weeks or months.

The secretion is scanty and serous, not forming pus unless irritated or inflamed. This secretion is inoculated on the patient himself with extreme difficulty, unless the sore has been sufficiently irritated to make it secrete a thick pus. It has never been inoculated on the inferior animals with success. There is generally but one sore; if there is more than one, they appear simultaneously, or almost simultaneously, and not by inoculation from the first one.

The sore is most generally superficial, "scooped-out," flat, or elevated above the surface; rarely deep, and then cup shaped, sloping toward the centre. The edges are sloping, flat and adherent, sometimes prominently elevated. The floor is red, livid, or copper-colored, often iridescent, and sometimes covered by a false membrane, scaly exfoliation, or scabs. The sore is so little painful as often to pass unnoticed. It is rarely attacked by phagedæna. Generally with the appearance of induration about the base of the chancre, or if not, a very short time afterward, if the chancre is situated on the penis, the glands in one or both groins enlarge and become indurated. This, like the induration of the chancre itself, is unaccompanied by the ordinary symptoms of inflammation, and is so insidious and painless as very rarely to attract the attention of the ordinary patient until it is demonstrated to him by the physician. The glands are hard, painless, even on manipulation, enlarged, and give to the fingers the same sense of induration as the base of the chancre; the skin is movable over them and can be pinched up. Generally several of the glands are enlarged, but one or two of them more prominently so than the others. As there are no symptoms of inflammation in the enlarged glands, so there is no tendency to suppuration, unless, in rare cases, from some extraneous cause; and if inflammation and suppuration should occur, the pus is not inoculable on the patient himself. This enlarged condition of the glands persists, as a rule, for weeks, and often for months.

If the patient is allowed to go without treatment, in a period varying from four weeks to six months, from the first appearance of the chancre, and almost always within three months, the so-called secondary symptoms of syphilis make their appearance.

During the interval between the appearance of the chancre and of secondary symptoms, the patient generally enjoys his usual health, until

just before the advent of secondary symptoms, when he usually begins to complain of headache and pains in the limbs, which are worse at night. He looks ill; he is languid, and complains of feeling out of sorts; he loses flesh, and there is often marked anæmia. There is very apt to be loss of appetite, and other evidences of digestive disorder; very often there are febrile attacks occurring, particularly at night, and followed by profuse sweating in the morning. The intensity of these prodromata, and their persistence, varies exceedingly. In some cases they hardly exist at all, in others they are extremely severe. When they do exist, they are generally very rapidly followed by a swelling and engorgement of the lymphatic glands in different parts of the body. Almost any of the glands may be thus attacked, but those most prone to be affected are the posterior cervical glands which lie along the posterior border of the sterno-mastoid muscle, those on the back of the neck beneath the occiput, and one just behind the ear, above the mastoid process, also one situated above the inner condyle of the humerus, between the biceps and triceps muscles. These glands are not indurated, as those in the groin, but are free from all signs of inflammation, and are generally not sensitive to pressure. In health, these glands can with difficulty be detected by the touch, but when syphilitically enlarged, they can be readily felt, and in rare cases are so much enlarged as to attract the attention of the patient and his friends. This enlargement of the glands almost always terminates in resolution, slowly disappearing with the decline of the secondary stage.

Shortly after or coincident with the appearance of this glandular trouble, various other symptoms make their appearance, such as, a greater or less degree of alopecia (affecting particularly the hair of the head, eyebrows and eye-lashes), or jaundice; then follow various eruptions on the skin, which may be exanthematous, papular, pustular, vesicular, bullous or tubercular in character; and with them, condylomata, mucous patches, or ulcerations of the mucous membranes.

The intensity of these symptoms varies greatly in different cases, apparently depending on the constitutional peculiarities of the patient, and on the greater malignancy of the disease in some cases. In a fortunate few, even without treatment, the chancre may be followed by a slight rash, a mucous patch or two, and then

the patient may entirely escape subsequent manifestations. But too often this is not the case, and the patient is doomed to months, and even years of suffering.

The points on the evolution of the disease thus rapidly sketched, to which we desire to draw particular attention, are, 1. The fact that a period of weeks elapses between the inoculation of the disease, and the appearance of the chancre. 2. That the base of the sore is indurated. 3. That there is a peculiar painless enlargement, and induration of the glands in the groin. 4. That the sore does not secrete pus. 5. That it cannot be inoculated on the patient himself. 6. That the sore, as a rule, is single. 7. That an interval of weeks elapses between the appearance of the chancre and the evolution of the secondary symptoms.

And now let us ask, "what is the effect of treatment in modifying the appearance of these symptoms." Ricord and Sigmund used to teach that if the chancre was thoroughly destroyed within four or five days after its appearance, secondary symptoms would not appear, but this was before any distinction was made between the various venereal ulcers, and the statement is not now found to be warranted by the facts in our possession.

Hill relates the case of a man, who, in sexual intercourse, tore his frænum at 4 A.M. The wound bled freely; fearing possible infection he called on Hill during the same day, within twelve hours after the accident. To quiet his fears, although there was no lesion evident except the abrasion, Hill cauterized the surface freely, at once, with fuming nitric acid; the slough separated in due time, leaving a healthy surface, which cicatrized promptly. About one month afterward the scar indurated; it never ulcerated again, but the regular manifestations of true syphilis came on at the usual time. Many cases are recorded in which destructive cauterization within a few days, and even a few hours after the development of the chancre, has failed to avert constitutional syphilis.

Diday reports a case occurring in a patient who had watched himself with the greatest care, from day to day, and almost from hour to hour. The chancre was not developed until a month after the sexual act, but the abortive treatment was applied within six hours of its first appearance; the sore healed in the course of three days, but secondary symptoms appeared three months afterward.

Many more examples might be adduced, but these are sufficient for our purpose. And now, as the local treatment promises so little, is there any constitutional treatment which holds out more hope? Of the thousand and one remedies used in the treatment of syphilis, but one has stood the test of time—mercury, sometimes vaunted as a specific, again, accused of causing many of the later manifestations of syphilis; at times neglected, often improperly administered. It is considered by the large majority of the profession, to-day, as it has been for years, as their sheet anchor in the treatment of syphilis. What effect has it on the chancre?

The report of the committee appointed to inquire into the pathology and treatment of the venereal disease, with the view to diminish its injurious effects on the men of the British army and navy, before whom appeared the most prominent civil, military and naval surgeons of Great Britain, under the head of the Treatment of the Indurated Sore by Mercury, says, "The weight of evidence on this subject preponderates in favor of the advantage of mercurial treatment in postponing or modifying the severity of the constitutional disease."

Cullerier says: "When mercury is administered at the outset, before the appearance of secondary symptoms, it interferes with their regular evolution, and often retards, although it does not prevent their occurrence."

Bumstead says: "The chancre is decidedly under the influence of mercury * * * under the use of this mineral reparative action is speedily induced, and unless the ulcer be deep and extensive, or the system much depressed, complete cicatrization may be promised the patient in the course of from one to three weeks."

In the article on Syphilis, in Holmes' System of Surgery, Mr. Henry Lee, after speaking of the inutility of the local treatment of chancre, says: "A sustained, judicious and constitutional mode of treatment is the only one to be relied upon in the treatment of this disease."

Mr. Jonathan Hutchinson says, in a paper read before the Hunterian Society, in 1874, "I presume it may be taken as a fact which no one doubts, that mercury possesses a remarkable power over certain syphilitic manifestations. No one who can trust the evidence of his senses dares to disbelieve that mercury can make an indurated chancre melt away, or that

it can procure, with wonderful rapidity, the disappearance of many forms of secondary rash. If mercury be given when a chancre is just beginning to show specific induration, it almost invariably puts a stop to it.

"If mercury be given after a sore has attained its full development, it is more slow in proving its power, but scarcely less sure; no induration can resist it.

"If mercury be given to a patient who has an undoubted indurated chancre, but in whom, as yet, no other constitutional symptoms are present, there is a fair amount of hope that it will prevent their occurrence.

"In cases in which an indurated chancre is treated by mercury, if constitutional symptoms follow, this will usually be in ratio with the character of the treatment and with the early date at which it was begun.

"In cases in which no mercury is given the disease often rises to exceptional severity."

Van Buren and Keyes say: "No amount of cauterization nor any local treatment can prevent the development of general syphilis after the poison has been once absorbed, much less after the chancre has appeared. Cauterization often hastens the healing, but induration is liable to reappear and re-ulcerate, and nothing is gained to compensate for the pain of the operation; general syphilis is inevitable. Internal treatment of chancre is the same as for early syphilis, and treatment should be commenced in all cases where the diagnosis is undoubted. It has a marked beneficial effect upon the duration of the chancre. When there is the least shadow of a doubt, no mercury should on any account be administered until an eruption has cleared up the diagnosis.

At the present time, almost all of the modern authorities believe in mercury, as the remedy, in the treatment of syphilis; and although they acknowledge the effect which it has on the chancre, and in modifying and delaying the appearance of secondary symptoms, yet still they are not agreed as to the advisability of giving it on the appearance of the chancre.

Cullerier says, "I do not treat chancres with mercury for the following reasons: When mercury is administered at the outset, before the appearance of secondary symptoms, it interferes with their regular evolution, and often retards, although it does not prevent, their occurrence; they still appear sooner or later. I know that the question will be asked, whether these symptoms

will not be more serious if we remain inactive? and it is this fear that has led to the use of mercurial treatment as soon as induration is clearly established. I followed this practice myself, for a long time, and it was only because I often saw very slight secondary symptoms in persons who had taken no mercury, and the same symptoms very intense and very persistent in patients who had been mercurialized for their induration, that I was led to renounce the practice and to content myself with treating the induration locally. It is only when the disease has followed its natural course, and after the first appearance of so-called secondary symptoms on the skin and mucous membranes, that I now administer any internal treatment; and I find that when the use of mercury is thus deferred, it is more easily borne by the system, and that the disease is modified and palliated more rapidly and permanently; for mercury is not a preventive of syphilis, it only attacks its manifestations more powerfully than any other remedy."

Bumstead, after acknowledging, as before quoted, the marked effect of mercury on the chancre, says, "No course of mercury administered for a chancre, however thorough or prolonged, is likely to prevent the subsequent evolution of general manifestations. I make this statement confidently, as the result of my own experience and that of others. In the very many attempts that I have made, to subdue the disease during the existence of the initial lesion, and prior to the appearance of general manifestations, I have always failed. Moreover, although the use of mercury retards the appearance, and probably ameliorates the severity of secondary symptoms, yet it is a fact, attested by many observers, myself included, that those cases ultimately do best in which specific treatment is deferred until the secondary stage."

We have thus seen, that while the authors of the present day, on this subject, regard the chancre as the true initial lesion of syphilis, as the first local sign of a constitutional taint, not as a precursor of syphilis, but as syphilis, and believe that when a man has a chancre, such as has been described, his blood is poisoned, his constitution is infected just as much as though he had alopecia, lichen, iritis, or a gummy tumor, and although they all admit the effect of the internal administration of mercury on the chancre, yet because it does not entirely prevent the subsequent evolution of symptoms,

some, if not a majority of them, advise us not to give it, and recommend us to wait. Although syphilis without treatment may in rare cases be a slight and trivial disorder, we know that it is more generally the case that a patient who has contracted syphilis is apt to feel the consequences of it for months and years. Have we any right to expect, then, that a treatment lasting only a few weeks will eradicate so serious a disorder; and have we not reason to be thankful if treatment will modify and postpone the symptoms of such a disease; and if we can accomplish this much, may we not hope, by a steady, persistent and continuous treatment, in time to cure? We no longer administer mercury as was once done, in poisonous doses. Salivation is a thing of the past. By properly regulating the dose to the individual, we may administer mercury continuously for months, and even years, without the slightest discomfort or inconvenience, even without the knowledge of the patient and with the happiest effects: as Barton, of Dublin, very well puts it, "Iritis, no doubt has frequently appeared while the system was under the influence of mercury, and the second eye has been attacked while salivation brought on in the treatment of the first was fully maintained; but salivation—that is the poisonous effects of mercury upon the system—is a very different thing from the effects produced by the same medicine when so given as to act entirely upon the disease.

Acting on these principles for several years, it has been my practice, as soon as a patient applied to me with a sore on his penis, having the history of a well marked incubation, and presenting the characters before described, unless some exceedingly strong contra-indication existed, to place him at once on mercurial treatment, watching carefully the effects, avoiding any action on the gums or bowels, combining this, if necessary, with a tonic treatment; regulating the patient's mode of life; keeping him under close observation; sometimes increasing, sometimes diminishing the dose; under certain circumstances suspending it altogether; and my experience has been that if the chancre is seen at once, and the treatment instituted without delay, in a few cases the patient will altogether escape subsequent manifestations, and in others the secondary symptoms will be exceedingly mild, the patient often escaping the various eruptions, perhaps only being troubled with the glandular enlargements previously

noticed, a slight pharyngitis, or an occasional ulceration of the lips or tongue.

The treatment is always continued until all traces of induration in the chancre and the enlarged glands has disappeared. If no other symptoms manifest themselves, the treatment is continued for some weeks, then intermitted for a week or ten days, and then resumed; it is continued in this way for several weeks, and is then discontinued for a longer interval, and so on, gradually diminishing the intervals of treatment, and increasing the intervals of rest, until a year or more has been passed. The rule always being to continue the treatment for a considerable period after the disappearance of syphilitic symptoms.

TENOTOMY OF THE TENSOR-TYMPANI.

BY LAURENCE TURNBULL, M. D.,

Surgeon to the Department of Diseases of the Eye and Ear, Howard Hospital, Philadelphia.

Having at various times published in the *REPORTER* the progress made in this operation, I deem it my duty, as I have at times written favorably in regard to its performance, to give the views of others who have performed it, but without success.

I do not agree with Dr. H. Schwartz* in his views that the good results obtained were due to the incision in the membrana tympani. In most of my cases I incised the membrana tympani before I resorted to the operation under consideration. The translation of two short articles† upon the subject, with an account of the modifications of the instruments employed, we trust, with the carefully made experiments of Dr. Hartman and Professor Politzer, will yield still better results than those previously obtained.

Dr. Essel's‡ wonderful experiments upon the lower animals, such as dividing the ossicular joints, tearing away the stapes and allowing the escape of the endolymph with impunity, so far as risk or injury to the brain is concerned, will give us more freedom in cutting the tendon of the tensor muscle of the membrana tympani, whilst operating for the relief of tinnitus depending upon pressure.

It is now stated in most of the works on diseases of the ear, that chronic affections of

* *Archiv. für Ohrenheilkunde*, Juli, 1876, p. 121.

† *Ibid.* p. 127.

‡ *Archiv. für Ohrenheilkunde*, No. XVIII, Leipzig September, 1876.

the labyrinth are hopeless if this operation will not afford relief. Electricity, strychnia and various other remedies have been tried, but have accomplished but very little.

In cases numbers six and eleven, (Tinnitus Aurium, L. Turnbull, Phila., 1875) already reported, the diagnoses were, "Chronic Disease of the Labyrinth and Auditory Nerve;" the operation of tenotomy was performed in both instances. The hearing distance was improved, and the tinnitus lessened in number six, and in number eleven the tinnitus, with distressing vertigo, was relieved by the operation, and in both cases we have recently heard from the patients, who report continued improvement.

In a recent paper, by Dr. Schwartz, he writes as follows:—

The remark of Dr. Kessel, in the Otological Section of the "Naturf. Versammlung," in

FIG. 1. Gratz, 1875, made during the discussion

of tenotomy of the tensor tympani (see A. F. O., x, p. 269), induced the writer to state that, from operations on fresh temporal bones, which he is accustomed to make each term, before his scholars, and from a long list of tenotomies on the living, done by him in the past twelve years, he has become convinced of the practical utility of a very simple tenotome (see Fig. 1). A separate instrument is required for each side. The writer has therewith always performed this little operation, and particularly when the auditory canal is large, without chloroform or fixation of the head. He first makes an incision, with the paracentesis needle, behind the upper end of the handle of the hammer and short process, and then introduces the tenotome into the cavity of the tympanum, with the bent point upward, and in a direction toward the tegmen tympani, and afterward turns it at right angles, so that the edge lies over the tendon. This is then divided, by a sawing motion, without, however, the exertion of much pressure.

Immediately after the cutting, he can generally see (unless the membrana tympani is very opaque) the accumulation of blood behind the membrane; this, however, becoming absorbed in a few weeks. *He has never, in any case operated*

on by him, been able to bring about a permanently favorable result.

On this account he has hitherto never considered it necessary to make any statement with reference to his tenotomy experience, and the more so, as the same negative results have manifested themselves in the practice of other men, with the exception, perhaps, of a single case (of Otto) from the practice of Dr. Trautmann, in which, however, it remained doubtful if the result was not due to the incision in the membrana tympani alone, or to the resulting cicatrix of two mm. in breadth.

While from the writer's own experience he cannot report any detrimental results of the operation, still, such have been made known to him through a highly respected colleague, viz: violent inflammation, extending itself from middle ear to labyrinth, with extensive impairment of the hearing, and an aggravation of the subjective noises. The reason of the failure lies, doubtless, as Magnus has suggested, in the existence of other pathological changes in the middle ear. Beside the thickening of the membrane, synostosis of the stapes, and oval window, thickening of membrane of round window, probably one of the most frequent is adhesive processes in the drum—string-like membranous synchiae, which may not only bind down the tendon of the tensor, but affect the ossicular and opposite wall of the tympanum.

He does not wish herewith to place in doubt the favorable cases of Gruber and others (see A. F. O., vi, p. 283), but thinks their success can be explained by the operation on the membrane, which preceded the tenotomy.

He does not believe the complete division of the tendon is destined to have a brilliant future; in fact, in many cases, it will be productive of harm; he believes, however, that the idea imparted to him by Tröltsch, in a recent letter, of a partial division of the tendon, will be productive of more good results. In order to accomplish such a division, the incision would have to be made from below upward, and the knife introduced in front of the handle of the hammer.

Dr. Hartmann believes that the disrepute into which the tenotomy of the tensor tympani has of late fallen, is due partly to failure in the operation or incomplete division of the tendon. In his operations on the cadaver, he first cut from the posterior segment, with the Gruber tenotome, and succeeded in dividing the tendon but six times out of thirteen cases. Believing

that the failure was because he did not reach high enough for the tendon, he had the blade curved on the edge and more on the flat, in order to strike the incus less lightly, and to avoid with more certainty the chorda tympani. With this instrument he succeeded, in the next twenty-two cases, in dividing the tendon seventeen times. Again, he succeeded, in company with Prof. Politzer, in cutting the tendon five times out of six, the sixth time the tendon being only cut into. To make himself certain of the relationship of the upper wall of the auditory canal, he made punctures through the membrane with a common needle, as high as possible, passing the needle along the upper wall of the canal. He found that, almost without exception, the tendon lay above the needle, and in one instance, 1 mm. from it. He thinks, on this account, that a sabre-like curve to the needle is very necessary for the certain division of the tendon. An attempt to divide the tendon from the anterior segment failed in every case, even when the needle was given the above curve. This is explained by the following conditions. The membrana tympani lies in a horizontal section through the external canal, at an angle of about 140° with its central axis. The tensor tympani runs generally at right angles to the surface of the membrana tympani (Helmholtz). Hence, an instrument which is to cut the tendon from the anterior segment, must have a curve of at

FIG. 2.



least one-half to the right. As the Gruber instrument does not possess this, it cannot do the work. With the complicated instrument of Weber-Liel, there is too much danger of injury to the hammer and the malleo-incus joint. Taking these points into consideration, he operated on a patient given him by Politzer, from the posterior segment, with an instrument curved slightly on the flat (Fig. 2) surface, 2 mm. wide, and so sabre-like curved, that, holding it in the position for operation, the point will rise above the upper edge about 1 mm. An instrument is required for each side and fitted in a handle (Fig. 2).

For the operation, puncture, 1-1½ mm. behind the handle of the hammer, just below the level of the short process; push the instrument,

with the handle slightly elevated, to the middle of the cutting part of the blade, at the same time keeping the handle close to the posterior wall of the canal. Now the handle is lowered, the instrument slowly drawn back, and at the close the handle is again elevated. In this way, the tendon is cut from below, in a direction from front to back, avoiding the inner extremity of the upper wall of the passage and the neck of the hammer which lies close to it. In performing this operation, we have to avoid puncturing too close to the hammer, for fear of striking it on the other side of the membrane. After passing the knife about 3 mm. into the tympanum, the handle is moved to the posterior wall of the canal, to avoid the promontory; the chorda-tympani was, in several cases, not touched, nor was the long leg of the incus.

He claims the following advantages:—

1. Simplicity and ease of performance, owing to the very slight change in the position of the knife after entering.

2. The instrument having a gradual curve, is not so liable to injure the parts, in case of sudden inadvertent motions, as those with sharp angles.

3. The operation can be done without confining the head, and thus rids the patients of their greatest dread.

4. As the cutting is done by a drawing motion, and not by pressure, lacerations of the membrana tympani and ossiculi are more easily avoided.

He is of the opinion that we can only judge of the importance of tenotomy by excluding the influence of other factors which come into play in the performance of the operation. He refers here, particularly, to the paracentesis of the membrana tympani, and in the posterior operation, to the division of the posterior fold. He thinks, before tenotomy is attempted in any case, the paracentesis, or division of the posterior fold should be tried.

In his case reported above, the division of the fold caused improvement, which was, however, not increased by the tenotomy which followed.

January 10, 1877, 1502 Walnut street.

—We have on hand, and shall shortly publish, a paper by Professor WILLIAM GOODELL, M.D., on "The Radical Treatment of Uterine Cancer;" also a Collection of Prescriptions for Diseases of the Nervous System, selected by Dr. C. C. VANDERBECK.

ASTHENIC PNEUMONIA.

Read before the Clinical Society of Baltimore,

BY PROF. A. B. ARNOLD, M. D.,
Of Baltimore, Md.

During the seven months dating from December 1st, 1875, to July 1st, 1876, I attended twenty-eight cases of primary pneumonia, of which two died, the rate of mortality being, therefore, about seven per cent. From these statistics I have excluded all cases of secondary pneumonia, which principally occurred as a complication in measles and pertussis. The list was further reduced by omitting cases of terminal pneumonia, or that form which is frequently observed to hasten the fatal termination of cachectic conditions, as cancer, tuberculosis, Bright's disease, etc.

The clinical history of all these cases of primary pneumonia presented the usual features of this disease. With the exception of three of the cases, the treatment was mainly expectant; and in view of the very moderate proportion of deaths, some support is lent to the opinion held by the majority of practitioners of the present day, that uncomplicated acute pneumonia has a natural tendency to recovery. But a certain type of this disease, which I shall presently illustrate by the relation of a few cases, offers many characteristics that deviate considerably from the course and symptoms of an ordinary case of pneumonia. Perhaps the discrepancy in reference to the change of the type of inflammatory disorders and the modification of treatment in accordance with the belief of such a change, may be due to the variable proportion of sthenic and asthenic cases of pneumonia which are observed in certain localities and at certain periods.

CASE 1.—H. S., a ship carpenter, twenty-seven years of age; had always enjoyed good health, and had worked at his trade for the last two years preceding his illness. He began to complain of a feeling of languor, headache, sleeplessness, pain in the limbs, anorexia and increased thirst. Three days afterward he had repeated slight chills, which were succeeded by some febrile symptoms that obliged him to take to his bed.

His condition when I first saw him was as follows: the pulse, temperature, and respiration greatly increased; a short cough, but no expectoration. He evidently suffered from

great nervous prostration. On examining the chest nothing abnormal was discovered. Towards evening he complained of soreness of the right side of the thorax, and in the night active delirium came on. On the next day all the febrile symptoms were aggravated, the depression was very marked, and the face had a cyanotic flush. The tongue appeared red and dry, and dark sordes had gathered on the teeth and nostrils. Physical examination of the chest detected dullness over the right infra-clavicular region, and decided bronchial breathing over the same part. The cough was very troublesome, and brought up some whitish, viscid mucus, though later in the day the sputa assumed a hemorrhagic appearance. An icterode discoloration of the skin, and a slight diarrhoea developed subsequently. Muscular tremor, subsultus, muttering delirium, and coma, preceded death, which happened on the sixth day of the disease. A post mortem was not permitted, which was the more to be regretted because I had failed to ascertain the extent of the splenic and hepatic dullness.

It will be observed that this case bears a striking resemblance to the history of an acute, infectious disorder. A prodromic stage had evidently existed; the usual initial rigor was wanting, and consolidation of the lung was much delayed. Besides, the adynamic or typhoid condition presented itself at an early date, and persisted throughout. All these features are not commonly observed in a primary croupous pneumonia. The treatment that suggested itself in a case of this order was supporting and stimulating, but the severity of the symptoms, and their tendency to a rapidly fatal termination, afforded little prospect for the successful use of therapeutic measures.

Epidemics of pneumonia, according to eminent authorities, exhibit an assemblage of symptoms and peculiarities of pathological changes which must be recognized as being essentially of an adynamic character. There is no reason to doubt that sporadic cases occur now and then, which present certain elements that cannot well be explained by the assumption of the local nature of primary acute pneumonia. But laying aside all theoretical considerations in connection with the pathology of croupous pneumonia, it is of practical importance to ascertain the conditions which invest this disease with an asthenic character. It is well known that pneumonia occurring in drunkards

is apt to lead to gangrene or to become typhoid in its character.

Laennec, in his classical description of the pneumonia of old people, or latent pneumonia, as he calls it, lays particular stress on the prominence of a low febrile condition which entirely masks the pulmonary symptoms. Low forms of pneumonia are indeed quite common in hospital practice, the class of patients which mostly resort to these institutions being especially obnoxious to the morbid influences of unfavorable hygienic conditions. In one of these examples of asthenic pneumonia which came under my notice at the Washington University Hospital, of this city, both lungs were affected.

CASE 2.—A young, mulatto woman was brought to the hospital after she had been ill nearly a week. She appeared to be extremely exhausted, the temperature was very high and the pulse exceedingly quick and feeble. The painful and shallow respiration and the ineffectual cough directed attention to the lung, which, on examination, presented the signs of extensive hepatization of the superior lobe of the right lung. Defervescence at the usual period was vainly looked for; additional portions of the implicated lung were speedily involved in the inflammatory process, which, finally, also attacked the other lung. The woman died on the third day after her admission. At the autopsy both pleural cavities were found to contain a moderate quantity of a sero-purulent fluid. From a number of places, especially of the right pleura, a soft exudation could easily be scraped off. Gray hepatization had considerably advanced in the upper portion of the lung of the same side, and purulent infiltration was visible at many points. Its middle lobe showed red hepatization, though the cut surface, on section, was only slightly granular. The inferior portion of the left lung presented a similar appearance.

In the series of clinical lectures in course of publication by Prof. Volkmann, a very able statement is found of the anatomical changes which are peculiar to asthenic pneumonia. It is noteworthy that the hepatization is commonly imperfect, the inflammatory exudation being quite soft, and presenting a smooth and even surface when cut. The spleen and liver are frequently enlarged, and the secreting cells of the latter organ appear in many places to have undergone the process of granular degeneration. The distinction between an ordinary and an

asthenic pneumonia, from a clinical point of view, may be summarized as follows: A prolonged prodromic stage is the rule in the asthenic variety; the initial rigor is absent, and the febrile movements are of a high grade. There is early failure of the heart's action; the nervous symptoms are severe, and the abrupt defervescence so characteristic of the asthenic variety is generally wanting.

HOSPITAL REPORTS.

NERVOUS INFIRMARY.

CLINIC OF S. WEIR MITCHELL, M. D.

REPORTED BY C. C. VANDERBECK, M. D.

The first patient this morning, a woman, is unable to walk, and so is wheeled into the room in a rolling chair. She is pale, and has a peculiar, dejected, yet placid countenance, a physiognomy sometimes securing the appellation of "hysterical face." Evidently, the face has not lost much flesh; at any rate, there is an absence of the hollow eye, sunken cheek and pinched expression, so characteristic of many chronic complaints. There is, however, an indefinable something about the countenance which leads one to suspect that the appearance of woe is not due to profound organic changes in the body, but rather to some perverted condition of the nervous system.

She is a married woman, 31 years of age, and has had several children, the youngest being 6 years old. She has been engaged during her married life in light housework, caring for her own home and family, but has never had occasion to overwork. Her home is situated in a healthy locality of the city. Her health has not been perfect for six years, though previous to this time she scarcely ever suffered with any sickness. In asking for the first deviation from health, she tells us it was a sunstroke, but a cross-examination elicits the fact that she had several spasms before this accident; it is necessary, therefore, to investigate the nature of these convulsions. She has, as a premonition of the attack, a "funny feeling all over," and once in a while a numbness of the hand precedes the indefinable prodrome; in either case the fit soon follows. The seizure is of a violent character, in which she screams lustily, and tears her hair and clothes; her limbs, and face, and trunk, being agitated, and contorted by clonic spasms. During the fit she is conscious, knowing distinctly what is going on about her, but is not able to talk or to control herself. These attacks are not prolonged, nor are they followed by stupor, or even drowsiness. It is worthy of note that she never has an attack in the street. Three of such fits occurred before

the alleged sunstroke, the nature of which we will now proceed to investigate.

She was out in the yard, hanging up clothes, exposed to intense heat, when she began to feel very badly, went to the house, and there had a convulsion, such as just described. She was unconscious this time several days, during which she had a number of fits. These attacks still occur, but at variable intervals; sometimes several happening in a day; then, again, she will pass months of freedom from them. It has been three months since she had the last one. She came to us more particularly on account of her inability to walk. Let us now carefully examine this paralytic condition. It came on eighteen months ago, and in a very singular manner. She had been attending a quack electropathic institution in this city, for the application of electricity as a remedy for the spasm. At her last visit the current was powerful, and hurt her very much. She went home, and soon afterward this condition of motor palsy came on, since which time she has not walked. For four days after the palsy first came on she could not swallow, and for two and a half weeks did not talk. She did not eat for a week, and could relieve thirst by taking only a drop of water at a time. It is not certain that she lost sensation in any of the extremities at the time of the motor palsy, and, in testing, there seems to be no anaesthesia at the present. This is a little unusual in these cases. She complains, however, of perverted sensibility, paræsthetic symptoms, a feeling as if insects were crawling in her hands and arms, a morbid sensation, called formication. At times, now, she loses her speech, and is able only to whisper, or else is compelled to write her wishes upon a slate.

This history, you notice, is developing into a very typical case, and there is no doubt that we shall find almost all the functions of the body, in some way or other, disturbed. She complains of pain in the region of the ovaries, extending across the abdomen, from the left to the right ovary; pain also in the back; none in the head, or only at rare intervals, and none at all in the arms or legs. She describes the special senses as impaired to a considerable extent. She is wearing glasses, and tells us that she can see only very imperfectly without them, and that she had perfect eyesight before the "sunstroke." The taste is often perverted, and subjective sensations of bitter and other disagreeable tastes are experienced. The same is true of the sense of smell; but it is not so much the false appreciation of a real sensation, as it is a false thought—a subjective sensation—a hallucination. There is no disturbance of hearing, which is not strange, for this sense is rarely affected in such cases as these. She has attempted to walk several times since the attack of paralysis came on, but she could not support her body. The face then almost touched her knees, and she succeeded in making only a few steps, the result of the effort being another long confinement to her bed. This has

happened several times. She says she has lost twenty pounds of flesh, and that her color is not the same as formerly. The appetite is variable; sometimes good, while at other times she eats nothing for a week. Bowels regular. As a rule she has full control over her bladder; but when worried or nervous she then is not able to hold her water. The amount of urine voided in the twenty-four hours varies; sometimes large quantities of limpid water are passed; other days only a cupful in all.

I ask her to extend her leg. You see she is able to accomplish it partially quite well. When I grasp the limb and forcibly extend it, I find some rigidity at the knee, and by her action she assures us that I am causing pain. This condition exists upon both sides.

Such, in brief, is the case before us, and what shall I call it? If I speak of it as hysteria the label is a good one; but I shall be asked by the precise among doctors if she has uterine disease? She has had it, or is said to have had, but has none now, unless we count as such ovarian tenderness. Or, shall I follow Paget, and call her's mimetic disease, and assume, which is true, that she has control over her symptoms. I do not doubt that she has; but, also, I am sure that, if ill treated, a time will come when she will cease to have control; and, if allowed to remain in bed, I am as sure that in time she will have contracted limbs. Let this state exist long enough, and there will follow sclerosis of the spinal cord, an incurable condition. Of course, I do not expect to see always this melancholy sequence, but it occurs often enough to make me anxious for an early rescue in all such cases.

The case I have shown you is one of those which sometimes have a more simple history, and merely remain in bed for years, until either some powerful motive arouses them, or an intercurrent disease takes them out of existence. I know of several which were cured by a desire to see the late Centennial Exhibition, and such women afford the examples of miraculous cures in Europe, by laying on of hands and the like.

I have relieved many of these women by simply keeping them at absolute rest for a week or two, and then ordering them to rise and walk. Some of you may recall such a case here, a woman who arose after fifteen years in bed, and staggered after me, wondering and cured. She became well and strong.

If such a woman, surrounded by all that wealth and sympathy can give her, has a doctor who lacks power to control her, or to influence her friends, she becomes a "bed case," and there is no limit to the time she may lie on her back. By degrees she over-cultivates her senses to feel all causes of annoyance, so that for her the room is darkened, the house made quiet, the piano hushed, the children forbidden to be noisy. It is a long and a sad story, and ends usually in opium, in increasing doses. Such people early acquire a capacity to have what I call suggested pain, that is, if you press on the spine, which is usu-

ally tender at some point, and ask her if you cause pain, for example, in the left breast, she will at first say, No; but if you persist, she will at last begin to show signs of doubt and then of suffering, and will exclaim, Oh, yes; please to stop; it hurts my breast. Our patient exhibits this curious phenomenon.

I heard a lecturer say, once, that it was easier to talk about hysteria than to cure it. I find it less easy to talk clearly about it than to cure it, and, as you hear, the word *hysteria* has again slipped from my lips, and so let it pass, for certainly the victims of mimetic disorders are nearly always, at some time, like our patient, fair instances of typical hysteria, with its phenomena of easy emotional displays, ovarian tenderness, convulsions, and the like.

As to treatment, I can assure you that however difficult it may be in the homes of such cases, if you isolate them from habitual cares and sympathy, and over-tender nursing, they can be cured almost unfaillingly; and if I venture to say that here, it is said before men who know that they can recall very few cases which have left this hospital uncured. I recall none which have remained as long as I wished, who have not been made well, or put on the road to health.

The present case is a bad case, and has had several doctors, and been eighteen months in bed, but I shall certainly cure her.

This prediction was rapidly verified. The woman was put at absolute rest in bed for a fortnight; she took twelve grains a day of valerianate of zinc. Her glasses were taken away, and proved to be plain flat glasses, which had been supposed by her to ease her head. On the tenth day she began to show annoyance at the order to do no reading or sewing. Bed on these terms proved disagreeable, and she longed to see her children and husband. At last the emotional annoyance resulted in complete apoplexy, and she began to use a neat little slate to communicate with those about her. The next day Dr. Mitchell came to her bedside, and when she offered the slate, covered with writing, he said "How are you?" and then in a tone of command, "Answer me." At once she spoke in a whisper. Dr. M. said speak louder, which she did. Then the slate was removed. Next day she was ordered out of bed, and without hesitation got up and walked, though feebly. In a few days she went all over the house, and at each gain was given back some indulgence, as leave to read, to see first her husband, then her children, and so on. The cure was speedy and complete.

Dr. M. remarked that if she had been thin and anæmic, and plainly weak, he would have kept her in bed, with use of massage, electricity and excessive feeding, until she had grown fat and full of blood. Then he would have made a call upon her to walk, aided by the renewed vigor his treatment would have given. But these easy triumphs, Dr. Mitchell remarked, were only to be had in the purely mimetic cases. Hysterical paralysis, with contractions

or with anæsthesia, often involved long and tedious treatment, and taxed every resource of the man and the physician.

PENNSYLVANIA HOSPITAL.

A CLINICAL LECTURE BY DR. R. J. LEVIS.

REPORTED BY JOHN B. ROBERTS, M. D.,

Resident Surgeon.

Extraction of Cataract.

Before entering upon the discussion of extraction of cataract, it may be well to make some general remarks concerning cataract itself as an affection, and also of the other operations for its cure. The definition of cataract is any loss of transparency in the lens, whether affecting the whole or only a portion of it; hence, we have lenticular cataract, when the opacity is in the lens substance itself, and capsular cataract, when the capsule alone has lost its transparency.

As vision is such an important sense, and as its loss renders the patient so helpless, considerable attention was given to the treatment of cataract in very early times; but owing to imperfect acquaintance with the anatomy of the eye, and, therefore, ignorance of its pathology, the operations performed can hardly be accepted as scientific ones. All the early surgeons believed that they depressed, not the crystalline lens, but a film in front of it, when they performed the operation of couching. Even Paré says: "In doing this it is necessary to take great care not to touch the crystalline humor, because, as we have seen, it is the principal instrument of vision."

There have been devised a great many operations for the treatment of cataract; which may be assigned to one or other of the following divisions:—

Displacement, where a needle is introduced into the eye and the lens pressed downward, or turned backward out of the area of the pupil into the vitreous body. Division, by which the lens is cut into pieces by a cutting needle, and is left to dissolve in the aqueous humor. Extraction, whereby, as the name implies, the opaque structure is removed from the eye by an incision.

The operation of displacement is now obsolete, because, though the immediate results were so astonishingly favorable (for sight was immediately restored after a simple puncture), the displaced lens was too prone to act as a foreign body, and give rise to destructive inflammation at a varying period after the operation. Division is now reserved for soft and congenital cataracts, while extraction is the recognized procedure to be adopted in the vast majority of cases of cataract; especially in the senile variety, which is by far the most frequent observed.

Extraction was the last of the various means for treatment of cataract to be suggested, and

well might it be, for there is probably no one operation within the range of surgery which necessitates so much precision and such delicacy of manipulation on the part of the operator. Daviel appears to have been the first to bring this method prominently to notice, though it was at that time a very rude procedure. A wound was made in the cornea by a lancet, the incision was then enlarged by a double-edged knife, and finally completed by the scissors. This was essentially a flap operation, and with certain improvements was the accepted method until comparatively recent times.

The flap operation, which was the one adopted before Graefe's linear extraction was proposed, gave about 50 per cent. successes. It was performed as follows: The knife entered the cornea at the equator of the circle, or just below it, a little inside its junction with the sclerotic, passed through the anterior chamber, made a counter-puncture on the other side, and emerged so as to divide fully one-half of the cornea, making a semi circular flap. If the lens showed no disposition to advance, the anterior capsule was lacerated with the cystotome, which was introduced carefully, to avoid entangling the point in the iris. Pressure was applied to make it (the lens) rotate on its axis in such a way as to present its upper edge toward the corneal incision, after which it could be easily extracted by delicate and dextrous manipulation. In these different steps there are some precautions necessary to be recollected. In inserting the knife, it must be held almost perpendicularly until after the cornea is perforated, or it will be thrust between the laminae of that membrane, just as you see the knife now penetrating between the corneal layers of this bullock's eye. You can understand that, if the knife be very flexible, it may thus traverse nearly the diameter of the cornea between the layers. Another point in regard to the incision is this, that the aqueous humor may escape, if the blade leaves an opening behind it, and the iris be forced over the edge of the instrument. This is obviated by using Beer's triangular blade; but it is not so available or necessary in the more recent methods of extracting cataract as it was in the old flap operation.

In 1811, Gibson devised an operation in which the lens was lacerated by a needle at one time, and subsequently, "after inflammation had subsided," the fragments removed by a scoop introduced through the cornea. Suction was proposed, in 1847, for the removing of softened lenses by means of a small canula introduced through the cornea. If the case be a favorable one, there is nothing in surgery that seems so surprising as this; the wound is so insignificant, and vision is restored so instantaneously and perfectly.

Up to the time of the introduction of Liebreich's method of extracting cataract, that operation of Graefe, which he styled "periphere linear extraction," was the most employed; for it, without losing any of the advantages claimed for the other methods, has some very

important ones which are peculiar to itself. The operation, though called Graefe's, was, of course, gradually developed by many experimenters, but perfected by the great German oculist.

The steps of the procedure are, incision, iridectomy, laceration of the capsule, and the removal of the lens. The lids are separated by a spring speculum, or, as Dr. Levis prefers, by the assistant elevating the upper lid by a plain speculum, and the ball is then steadied by the operator grasping the tissues over the tendon of the inferior rectus with fixing forceps. A narrow knife is then inserted into the sclerotic, one-half line behind the edge of the cornea, and one-half line below a tangent to the top of the corneal circle, with its point directed downward and inward. This position brings the knife into the anterior chamber, because the sclerotic overlaps the cornea, somewhat like the case around a watch crystal. After the knife has penetrated the anterior chamber a short distance, the handle is depressed and a counter puncture made at a point corresponding to the position of the puncture. Up to this point the edge of the knife has been directed upward; now it is turned forward a little and the section completed by cutting in such a manner as to leave a conjunctival flap to cover the wound, because it is supposed to give better primary union. The next step is to introduce the iris forceps, or as Dr. Levis prefers, the delicate iris hook, which grasps the pupillary margin of the iris, and draws a portion through the wound which is incised. The capsule is then lacerated, pressure made to produce rotation of the lens, and the cataractous body removed by pressure, or by traction with the spoon or Levis's wire loop.

If the pressure which is causing the lens to emerge through the cornea be continued after its thickest portion has passed, a portion of the vitreous will be lost, which is an unfortunate, though not a very grave complication. If some of the vitreous escape during the incision, the lens will fall back into the space left, and will require greater delicacy of manipulation for its removal. In some instances, like the case operated upon the other day, the lens, instead of rotating with its upper edge forward toward the incision, may tilt backward and require traction. In that instance, you recollect, judicious pressure caused the small lens to turn completely over and emerge with its lower edge uppermost.

Until within a few years, Graefe's method was the accepted operation everywhere, but Liebreich, of St. Thomas's Hospital, London, has devised an operation of greater simplicity, which, at present, has a good many adherents. He, while operating by Graefe's method, moved his incision nearer and nearer to the centre of the cornea; and finally found that, with this position of the wound, and with the form which he adopted, there was no iridectomy required to allow the lens to make its exit. Liebreich makes a puncture, one millimetre external to

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the corneal border, on a level with the margin of the pupil, carries the knife across the anterior chamber without any change in direction, makes the counter-puncture and divides the cornea by an incision as nearly straight as can be made on a globe. Finally, the capsule is divided and the lens pressed through the pupil.

The treatment to be pursued after the opaque lens has been extracted by any of these methods is most important; for there is no doubt that the earlier surgeons lost many eyes by reason of the active purgation, the bleeding, mercurialization, and the starvation diet to which they subjected their patients. After the operation a little solution of atropia (gr. iv or gr. viij ad. fl. ʒj) is placed in the eye, to keep the pupil dilated and ease pain. By the way, this drug should always be applied also before the operation, in order to have a widely dilated pupil, which greatly facilitates the operation, though it does contract as soon as the aqueous humor escapes. The dressing used by Dr. Levis is very simple, no bandage being used; a few semi circular pieces of black silk adhesive plaster are placed upon the upper lid, to stiffen it and cause it to act like a splint, and then a straight piece of the adhesive plaster is superposed from the root of the nose to the cheek. The other eye is also closed in the same way. This is much lighter and cooler than the cotton packing usually placed over the eye, allows all secretions, which are so apt to cause conjunctivitis, to drain away from under the lid, and enables the surgeon to look at the eye and instill atropia without removing the dressing. At the same time it perfectly protects the eye, which cannot be opened, because the stiffened upper lid will not allow itself to be raised. The patient is then kept in bed, in a darkened chamber, for several days, before the eye is allowed to go uncovered.

Having now described at considerable length the manner of extracting cataract according to the different operations, it is but proper to devote a little time to the consideration of their individual merits.

In the flap operation there is a tendency in the wound to gape on the slightest motion of the ball, which is obviated by Graefe's linear incision, which can only be made to gape by pressure. Then, again, prolapse of the iris not unfrequently occurs in the former, while in the latter the iridectomy precludes this mishap entirely. There is also in the flap extraction much greater likelihood of suppurative keratitis occurring, and more probability of undue pressure being made during the expulsion of the lens, because it is the only means of removing the lens, as traction cannot well be employed in this method. Liebreich's operation is more simple than Graefe's, and leaves no disfigurement of the pupil, but, on the other hand, there seems to be more danger of synechia occurring. If the cataract is fully ripe, Liebreich's method is certainly a very successful one, but if the external portion of the lens is soft, there is danger of it being scraped off as the body makes

its exit through the pupil. This requires, then, the introduction of the spoon for its removal. The operation performed in the case of the other day, and the old woman to-day, was a modification of Graefe's, in so far, that the incision was made within the circumference of the cornea, thus preventing hemorrhage from the conjunctiva, instead of around the cornea in the sclerotic tissue. The iridectomy and the other steps were the same as in Graefe's extraction.

The percentage of success since the rejection of the flap operation has been greatly increased; instead of losing about 50 per cent. of all cases operated on, the percentage of failures in the practice of skillful operators is only 4 or 5 per cent.; and, indeed, in one hundred successive cases, recorded a few years ago, Dr. Levis lost completely only two eyes. Age is no contra-indication to operation, for success has attended patients of advanced age. Some years ago Dr. Levis extracted in an old woman of 96 years, and gave her vision which enabled her to read No. 1 of Snellen's test types, and the newspapers, and her small prayer-book, with great ease. She died two years later. In regard to extracting the cataractous lenses of both eyes at the same time, it may be said that a great deal depends on circumstances. If the lenses are both ripe, the patient healthy, and if he comes from a great distance, it may be allowable to do both operations at once; as in several cases that have given perfect results in this hospital during the last year or two.

The double extraction done a few days ago gave a perfect result, and the man will return to his home in a day or two. He will, of course, need spectacles to take the place of the extracted crystalline lenses, in order to remedy the condition of aphakia now existing. He has been tested, and it has been found that he sees best with convex lenses of five inches focus for distant vision, and of three inches for reading. It is necessary to have two pairs of glasses, because there is no accommodation left him. The case operated on to day, which is the 504th extraction which Dr. Levis has done since the flap operation was abandoned, will be treated now in the same manner as the other patient was, and will be shown again in a few days, wearing her spectacles.

The Voices of Animals.

Professor Landois, of Freiburg, has lately published an interesting work on the "Voices of Animals," which affords additional evidence of the universality of vocal sounds among the lower forms of animals, including the Mollusca. The author considers it as beyond all question that ants possess a vocal speech, inappreciable by human ears, by which they are enabled to exercise those higher mental faculties to which they owe the development of the advanced social organization which they exhibit in their communities.

MEDICAL SOCIETIES.

NEW YORK PATHOLOGICAL SOCIETY.

Stated meeting, December 13th, 1876. Dr. C. K. Briddon, President, in the chair.

Dr. Heitzman stated that he had made a microscopical examination of the polypus of the rectum presented by Dr. J. Lewis Smith at the last meeting of the society, and he had found it to present all the appearances of adenoma.

Carcinoma of Oesophagus and Stomach.

Dr. Delafield presented a specimen of cancer of the oesophagus and stomach, in behalf of a candidate, and read the following history: A man, aged sixty, had been admitted to Bellevue Hospital, on November 22d, 1876. His family history was good. Three years ago he first noticed a difficulty in swallowing, which lasted for one year. He had been well up to six months ago, when he began to lose flesh. On admission, the patient was found to be very much emaciated. There was no nausea, vomiting nor abdominal pain. When he attempted to swallow liquids an obstruction was felt in the oesophagus. These, however, would generally pass the obstruction, but sometimes would be regurgitated. The patient complained of pain in the scapular region on swallowing. On passing the bougie into the oesophagus, it would become arrested at its lower portion. Only slight pain was complained of by the patient after it had been passed. The diagnosis of probable epithelioma of the oesophagus was made. The patient had retained three or four mugfuls of egg-nog in the hospital. Nutrient enemata had to be resorted to, and were continued during twenty-four hours before death. On December 7th it was decided to perform gastrotomy, but after a few inhalations of ether, the patient ceased to breathe. Artificial respiration had been practiced, according to Sylvester's method, and brandy administered, with the effect of reviving the patient. He gradually failed and died on the next day.

Autopsy.—The operation was attempted on the dead subject which had been intended on the living; an incision was accordingly made in a line parallel with the ninth rib. The stomach was then secured with great difficulty, and on making traction it could not be brought down, owing to the presence of adhesions. The abdomen was then laid open. The stomach was found contracted, and its surface irregular. A new growth was found occupying its anterior walls. On opening the oesophagus and stomach, the new growth was found to involve the lower portion of the former, extending to the anterior and posterior walls of the latter. The heart was in a condition of brown atrophy, as is seen in persons who have undergone starvation.

Dr. Delafield, in connection with the above case, exhibited three specimens of cancer of the stomach preserved in alcohol, with brief histories, as follows:—

CASE 1. A man, aged forty-seven, had, eleven

months before his death, complained of pain in the epigastrium and vomiting. These symptoms had continued throughout the patient's illness. Two months before death coffee grounds vomiting had occurred. The presence of a tumor had been detected in the epigastric region. At the autopsy it was found that the disease had involved the pylorus. The fact that a tumor had been felt through the abnormal parietes during life was interesting, such not being usually the case.

CASE 2. This patient had been taken sick fifteen months before death; during this period she had suffered from progressive emaciation, but never from epigastric pain, nor vomiting. No tumor had been discovered in the epigastric region, but the left lobe of the liver was enlarged. The disease had been diagnosed as cancer of the liver and not of the stomach. The autopsy had revealed the presence of a new growth in the anterior wall of the stomach, and, by contiguity, enlargement of the liver, in which secondary new growths had been discovered.

CASE 3. The patient was a woman, twenty-eight years of age, who fourteen months before she died had suffered from vomiting and constipation. She had not complained of pain in the region of her stomach during her illness. The vomiting had persisted up to within one month of the patient's death. There had been no cachexia. No abdominal tumor could be detected. The patient had been the subject of progressive emaciation. She at last had literally died of starvation. No diagnosis of her disease had been made, but it was thought that some obstruction existed at the pyloric orifice of the stomach. The post-mortem examination showed the stomach to be dilated, its coats thickened at the pyloric orifice, which was narrowed to such a degree as to scarcely allow the passage of a goose quill. There had been no tumor of the pyloric extremity found, but the coats of the stomach in that region were infiltrated with cancerous material. The points of interest connected with this case were: (1) the age of the patient; (2) the marked absence of symptoms, and (3) the absence of tumor.

Neries—Pentastoma Constrictum.

Dr. Austin Flint read a report from Dr. Dalton, accompanying which was a prepared specimen of a neries, or common sand worm, used by fishermen as bait. Dr. Dalton had found that the specimen which Dr. Flint had presented at the last meeting of the society (and said to have been expelled from the mouth of a woman), was nothing else but the fragments of a neries.

Dr. Flint next presented a specimen of a rare parasite, called the *pentastoma constrictum*, which had been sent him over a year ago by Dr. Campbell, of Albany county, Missouri. The parasite resembled an ordinary maggot. The history of the case was as follows:—

J. R. R., aged thirty-six, a farmer by occupation, had served three years in the army. He stated that he had been attacked with pleurisy

or pneumonia, in March. The attending physician, he said, had, however, pronounced the disease to be pneumonia. In the following September the patient was first seen by Dr. Campbell. On making a physical examination of the chest, a large vomica was discovered at the apex of the right lung. One night the patient felt as if something had suddenly given away in his left lung, which had been followed by profuse expectoration of purulent matter. He had continued to expectorate, and had become greatly emaciated. His abdomen was bloated, and the liver was found enlarged. One month before he was seen, he had first vomited these parasites. He had coughed up between seventy-five and a hundred of them. They would crawl about the floor; some of them which had been placed in a bottle had lived for ten days. On auscultation, gurgling and tinkling were heard at the apex of the left lung.*

Removal of Scaphoid, Internal and Middle Cuneiform Bones—Congenital Luxation of tibia.

Dr. Erskine Mason brought to the notice of the Society a boy, to show the results of an operation which he had performed upon the foot. The history was as follows:—

A boy, aged seven, whose family history was good, had had his right foot injured, which had been followed by erysipelas. The patient had been admitted to Bellevue Hospital on September 12th, 1876. On admission, the foot was found to be very much inflamed, and over the internal cuneiform bone an opening was seen. By September 20th the erysipelas had entirely disappeared.

On September 26th other abscesses were discovered about the foot, which freely communicated with each other. No dead bone was detected on probing the sinus. The next day the opening was enlarged, and the scaphoid, internal and middle cuneiform bones, and the head of the metatarsal bone of the great toe, were removed. A seton of oakum was then introduced. The limb was afterward put up in

* A history of this parasitic disease may be seen in Aitken's Practice of Medicine, under the heading of "Occasional Parasites."

plaster-of-paris. Subsequently a silicate of soda splint was substituted for the plaster-of-paris. Three months had elapsed since the operation had been performed. The patient could bear the weight of his body on the foot. There was still slight tenderness on pressure over the foot.

Dr. Mason said that his experience was limited to another case of the same character. This was the case of a girl, seven years of age, upon whom he had operated in January last. He had removed all the metacarpal bones of the wrist. The exciting cause of the disease had been a splinter. Three months after the operation the child could sew and play the piano.

Dr. Mason then presented a specimen of anterior luxation of the tibia on the femur, taken from an infant one month old. The toes, which were six in number, could be brought up to the abdomen, owing to the luxation of the tibia. The luxation could be readily reduced. Dr. Mason said that these congenital luxations were quite rare, and had been reduced with good results, splints having been applied to hold the limb in position.

Sarcoma, and Stricture of Colon.

Dr. Stimson presented a specimen, with a history as follows:—

A man, aged sixty-three, had complained of pain in the right hypochondrium, and constipation, which laxatives and enemata had failed to relieve. The diagnosis of mechanical obstruction of the intestines had been made. The patient had died in a state of collapse at the end of six days of illness.

Autopsy.—The peritoneum was congested, and presented evidences of fibrinous exudation. The lowest part of the ileum was found in the right iliac fossa. A stricture and tumor of the colon, three inches in breadth, had been found, in which was imbedded the pit of an apple. At the distal side of the stricture, signs of old ulceration and hemorrhage therefrom (not recent) were visible. The tumor was of the spindle-celled sarcoma variety.

EDITORIAL DEPARTMENT.

PERISCOPE.

The Local Treatment of Psoriasis.

Mr. Wyndham Cottle, M. A. (Oxon.), F. R. C. S. Eng., Senior Assistant Surgeon to the Hospital for diseases of the skin, Blackfriars, writes to the *Lancet*, September 30, 1876:—

There is a class of cases of psoriasis, namely, those not uncommon examples where there is

an excessive formation of dry scales, in many instances even producing the thick crusts with which observers of this complaint are familiar, and forming in chronic and neglected cases, as long as they remain, an insuperable obstacle to recovery. After various trials, I have found the subjoined method most advantageous.

All crusts and scales having been removed, as far as possible, and the absence of grease being ensured by wiping the parts with ether or rectified spirit, and the skin thoroughly dried, the

solution of india-rubber is thickly applied with a brush over the affected places, and this application renewed as often as is needful for the formation and maintenance of a continuous covering of india rubber over the affected skin. The chief difficulty I encountered lay in procuring complete adhesion of this covering, and in this respect I found india-rubber much superior to gutta-percha or collodion flexile, etc.

I would claim for this mode of treatment that, in the majority of the class of cases mentioned, the recovery has been more rapid than with the ordinary local measures, and also very comfortable to the patient, free from the objectionable odor of the tar compounds; that its action is confined to the affected parts themselves, requiring no confinement of the patient, nor indeed causing any inconvenience to him; a further recommendation being its ease of application.

Croton-Chloral and its Use.

Dr. E. M. Skerritt writes to the *Lancet*, on this subject, as follows:—

In my hands, croton chloral has been of the greatest use in neuralgias of the fifth nerve, and has appeared, in many cases, to act as a specific. Its effect is not always, however, to be relied upon, and I have found that certain conditions are more favorable to its success than others; thus, the most marked benefit has attended its use in the neuralgias of young or comparatively young patients, especially in the headaches of anæmic women and girls. In these cases there has been either cure or relief in 86 per cent. of the cases treated. About the climacteric period, the success has fallen to about 50 per cent., while in later life there has again been a rise to about 60 per cent. At the climacteric period, bromide of potassium has seemed to be more reliable in its action.

Again, when the headache has occurred in patients with marked hysterical symptoms, the result has not been nearly so favorable; in fact, I have come to look upon the presence of hysteria as making the success of the drug very doubtful.

Dose and Mode of Administration.—Croton-chloral is but sparingly soluble in water, but to a sufficient degree to make a solution as strong, in my opinion, as any patient will be likely to take, as it is the reverse of palatable. Ten grains will dissolve in the ounce of water, without much difficulty; glycerine makes it rather more soluble. Dr. Yeo gives four grains to the drachm, as the strongest solution that can be made with water and glycerine. At the hospital, Mr. Berry uses an alcoholic solution. The drug may also be administered in the form of pills.

There does not seem to be any risk from large doses of croton-chloral. Dr. Ringer has given five grains to a patient, every hour, for a fortnight; and Dr. Liebreich has prescribed a sleeping-draught, containing about a drachm and a half.

In hospital out patient practice, I generally order five grains, three times a day, and have found that patients unrelieved by this dose are often very much benefited by the addition of another dose of five grains per diem. Elsewhere I have given the same dose every two, three, or four hours, according to the urgency of the case.

The only unpleasant effects I have observed have been the following: In two cases, vomiting; in one of these this was so constant after the dose that the medicine had to be discontinued; in the other it ceased when the drug was taken immediately after meals, and the desired effect was obtained. In several cases, drowsiness, but not so great as to necessitate the discontinuance of the remedy. In two or three cases, giddiness; in one, headache.

Puerperal Glycosuria.

At the meeting of the Biological Society of Paris, on the 11th of November, M. Gubler made an interesting communication (*Le Progrès Médical*, November 18th), embodying the results of his researches upon glycosuria in the puerperal state. He finds that saccharine urine follows suspension of lactation in healthy women, from diseases of the infant, and also when lactation is arrested on account of some slight ailment on the part of the mother, but not if her disease be a severe one—e. g., typhoid fever. The glycosuria can be prevented by slight purgation; it is never very marked, but the presence of sugar in the urine is always sufficient to be detected by the usual reagents. A solution of bichromate of potash and sulphuric acid gives a larger precipitate than the ordinary reagents, possibly because of the existence of some other substance besides glucose. The absence of albuminuria is accounted for on the ground that human milk is rich in lactose, but poor in casein and butter. The conclusion drawn is that glycosuria appears when lactation is suspended, but only when the general health is not much disturbed; it is usually slight, appears in twenty-four to thirty-six hours following the arrest of lactation, and lasts for about a week. Pregnant women sometimes pass saccharine urine, and especially primiparæ, toward the end of pregnancy.

The Treatment of Colliquative Diarrhœa.

The *Lancet* says that the diarrhœa which often occurs towards the close of life in patients suffering from long-standing nervous disease or other conditions productive of cachexia, and in many cases is independent of organic disease, is the most rebellious to ordinary astringent and sedative remedies. Dr. Bonfigli has recently called attention to this form of diarrhœa, which he calls *vaso-paralytic*, in which the evacuations are frequent, watery or serous, and no lesion is found in the bowels after death, such as waxy degeneration or ulceration, only at most some slight injection of the mucous

coat. From a consideration of its physiological action, he was led to try chlorate of potash as a remedy, and in fifteen cases he gained very markedly beneficial results from its use. He found it necessary to continue its employment for some time in severe cases, and the diarrhoea was held in check only so long as the drug was given. He recommends the increase of the dose until a beneficial effect is observed, beginning at half a drachm in the twenty-four hours, and increasing to two or three drachms if requisite. When, however, there is degeneration of the mucous coat, or when the diarrhoea is maintained by intestinal catarrh, the drug exerted little or no effect. On the latter point the observations of the author appear to be at variance with those of the late Dr. Copland.

Iodide of Starch as an Antidote.

Dr. Bellini, Professor of Toxicology at the Royal Institute of Florence, recommends iodide of starch as a valuable antidote in some cases of poisoning, especially by alkaline and earthy sulphides, caustic alkalies, and ammonia, and the vegetable alkaloids, for which iodized solutions are generally given. In poisoning by alkaline or earthy sulphides he believes it preferable to all other antidotes; in poisoning by caustic alkalies it is applicable when acid drinks are not at hand. Where iodized solutions of iodide of potassium are usually employed for poisoning by vegetable alkaloids, the iodide of starch should be used instead, as far less irritating. It may also be given in some cases of chronic lead or mercurial poisoning, and particularly to children, in the form of syrup.

REVIEWS AND BOOK NOTICES.

NOTES ON CURRENT MEDICAL LITERATURE.

—Under the title, *Bibliotheca Medicinæ Militaris et Navalis*, Staff Surgeon Dr. Frederick Fränkel, of Glogau, has undertaken a praiseworthy and most arduous task. His object is to form a systematically arranged index to the literature of military and naval medicine. The subjects are to be arranged under the heads of Bibliography, Biography, History, Organizations, Recruiting and Invaliding, Hygiene, etc.

—No. VI of Dr. Carl Seiler's "Micro-Photographs in Histology," contains four very beautifully executed photographs. The work is published monthly. \$6 per annum. Porter & Coates, publishers.

—The well known scientific periodical published in Germany under the name of Dubois-Reymond and Reichert's *Archiv*, and formerly

as Meckel's, and subsequently as Müller's *Archiv*, is to be divided into two parts. One is to be devoted to Physiology, and will be edited by Dubois-Reymond and Ludwig; the other to Anatomy, under the management of Braune and His.

—"The History of Spontaneous Generation," by Dr. Edward S. Dunster, a pamphlet of thirty pages, is a learned and fair summary of the claims of each side on this vexed question.

BOOK NOTICES.

Healthy Skin; a Popular Treatise on the Skin and Hair, their Preservation and Management. By Erasmus Wilson, F. R. S., F. R. C. S., etc. Eighth edition. Philadelphia, Lindsay & Blakiston. Cloth, 12mo, pp. 311.

It is rare that a medical book is brought out again after thirty-one years from its first appearance. Such is the case with the present little volume. It first appeared in 1845, and about every four years since a new edition has been called for. The present one has received a careful revision at the hands of its eminent author, and will be found an excellent manual on its branch.

The Electric Bath, its Medical Uses, Effects and Appliance. By George M. Schweig, M. D., etc. New York, G. P. Putnam's Sons. 1 vol., cloth, 8vo., pp. 134. Price \$1.

The electric bath is one of several modes of applying the electric current over the whole or a large part of the surface of the body at a time. To the effects of the current are, however, added those of the warm bath, or a medicated bath; and it is also claimed to be more literally "general" than other methods so-called. It is, therefore, well worth the attention of electrical specialists; and they will find the manner of using it, the indications for it, and the results which may be expected from it, very temperately and fully stated in this monograph. They are not conspicuously different from those of other forms of electro-therapeutics; but, too much wont to find extravagant claims, and an interested enthusiasm in the works on this branch, we were the more pleased with the very honest and scientific spirit with which Dr. Schweig explains his practice. His book deserves high praise.

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ON "COLLES' LAW" OF IMMUNITY FROM SYPHILIS.

The name of Mr. Abraham Colles' is best known in the history of surgery from the peculiar fracture of the radius, which he first described with precision, and which has since gone by his name. Forty years ago he was one of the most eminent surgeons of Dublin, and being both a thinker and a writer, as well as an observer, he published several treatises on surgery, remarkable for their insight into pathological processes.

One of these works is entitled, "Practical Observations on the Venereal Disease, and on the Use of Mercury," which must always rank alongside of Hunter "On the Venereal," as one of the English classics in syphilography. In this treatise he was the first to lay down what is known as "Colles' law," embracing one of the most extraordinary truths which are connected with the history of this disease. The

law may be formulated in the following words:—

The woman who bears a child to a syphilitic father rarely contracts the disease, and in any case can never subsequently suffer from it.

This startling conclusion was derived by Mr. Colles from observing that in no instance does an infant which derives syphilis congenitally cause an ulceration on the nipple of its mother while nursing, whereas it will nearly always infect a hired wet-nurse previously in good health. Further observation shows that these mothers cannot be syphilized afterwards by chancres, in impure connection.

No writer since the time of Colles has refuted his statement; on the contrary, such eminent observers as Diday, Baumes, Egan and Mr. Jonathan Hutchinson, have expressly stated that their experience is in conformity to it.

The last mentioned surgeon, in an address before the Hunterian Society of London, has recently gone over the subject with care, and an extract from his paper cannot fail to interest the reader. He remarks:—

As far as the facts on this point go at present, they seem to imply that syphilis by fetal-blood contamination is an exceedingly different thing from syphilis by a chancre or by inheritance. It appears to differ from both the latter, quite as much as vaccinia does from variola. In a considerable ratio of cases—perhaps in half—the woman never knows that she is ill. She has neither primary, secondary, nor tertiary symptoms, but remains throughout apparently in perfect health. Something happens in her blood and tissues which gives her immunity as regards the syphilitic virus. The skin of her nipple cannot take on the chancreous condition; every cell in her body has undergone a change, and is no longer susceptible to this most potent poison; and yet she has never known an hour's illness. Remembering how severe a disease chancre-syphilis usually is, this fact is even more astonishing than the parallel one, that vaccinia can substitute variola.

It appears, therefore, possible that under certain conditions the system can so receive the syphilitic poison that without in the least suf-

fering from its presence, it can acquire perfect immunity from it ever afterward. This remarkable deduction points to a possibility of the discovery of a method of inoculation by which the venom of syphilis will be neutralized, and protection from it be obtained, as complete as we now have against small-pox. The syphilitic virus in the spermatic fluid, or else in the blood of the fetus, exists there in a form not directly inoculable, and yet with the power of so impressing the economy that it becomes indifferent to the presence of the virus in any other form.

In conclusion, Mr. Hutchinson proposes to the profession the following inquiries, which we take pleasure in submitting to the practitioners of this country:—

1. Can any exceptions to Colles' law be produced? Has any one ever seen a case in which a mother suckling her own syphilitic infant contracted a chancre on her nipple from its mouth?

2. Can any cases be produced in which a woman who had borne syphilitic children subsequently became the subject of chancre, contracted in the ordinary way, or of a well-marked outbreak of secondary symptoms, such as would suggest the probability of a recent chancre?

3. Can any cases be found in which a woman having borne a syphilitic child, without having been herself the subject of chancre, has within a short period lost her husband and been married again to an untainted man? Cases in which these various conditions are conformed to are probably very infrequent, but, should they be obtainable, it will be of extreme interest to know whether such women bear syphilitic infants.

4. Are there any facts which would show that women who have never had chancre-syphilis, and have borne syphilitic children without presenting any symptoms during pregnancy or within a few years afterward, may yet later on suffer from definite tertiary lesions? I have myself recorded a good many cases which seem to illustrate this; but in none had the patient been throughout under my own observation, and I had to rely upon her memory for the fact that early symptoms had really been absent.

These questions merit, and we trust will receive, the most careful reflection.

NOTES AND COMMENTS.

The Cold Bath in Typhoid.

Professor Sée, of Paris, condemns the use of the cold bath so much in vogue in the treatment of typhoid fever. According to his own experience, and that of many other physicians, it is not only a useless remedy, but absolutely dangerous in the treatment of this affection. Though the use of the cold bath in fevers is not a new remedy, but an old one revived, many physicians, out of despair for something better, gladly availed themselves of it; but soon found, to their cost, or rather to their patients', that it was a most treacherous remedy, at least in the treatment of typhoid fever. It is true that it reduces the high temperature of fevers; but this effect is only temporary, and often the reaction is so great as to raise the temperature higher than it was before the bath. In addition to this, the cold bath in typhoid fever not only increases the tendency to intestinal hemorrhage, but it has been found to produce hæmoptysis and metrorrhagia. M. Sée suggests that there are other means by which the temperature of the body may be reduced; sponging the body with vinegar and water, cold or tepid, is equally efficacious, and attended with less danger and inconvenience; but quinine, according to him, is the remedy, and ought to be more extensively employed than it generally is, as he knows of no agent, except, perhaps, alcohol, that more effectually lowers the abnormal temperature of the body, whether of man or of the lower animals.

A Pleasant Substitute for Cod-liver Oil.

The *Journal d'Hygiène* recommends as an agreeable substitute for cod-liver oil a soup made of fish livers and calves' or sheep's brains. This should be prepared *en purée*, as the cooks say, and may be made exceedingly palatable. The ingredients contain iodine, phosphorus of lime and fat, the active principles of the oil.

Comparative Fecundity.

According to a recent study by Dr. Bertillon, of Paris, a notice of which appears in the *Journal des Sciences Médicales de Louvain*, the most fertile wives in Europe are those of Holland, the next fertile those of Flemish Belgium, the least so those of France. Belgium, how-

ever, possesses the fewest wives of child-bearing age, a fact the writer attributes to the number sent to convents.

How to Prepare Raw Meat.

Raw meat is now used to a considerable extent as an agent of hygiene and therapeutics. The following directions with regard to it, from the *Journal de Pharmacie*, may not be without interest. Beef is preferable to mutton. The fat should be removed (one reason being that it may contain cysticercus). The best part is the rump steak. The fibres are here best suited for rasping (*râpage*) in longitudinal direction. This is the best mode of division. Chopping removes from the meat most of its juice, and does not give such good division. The rasping is done with a sharp knife-blade—the sharper the better. The piece of meat should be pretty thick, and of lozenge shape; the rasping can be done on all the facings, in the natural direction of the muscular fibre. The piece should rest, held by one end, on a resistant and slightly inclined plane. The meat is generally reduced to the form of a pill or bolus, which is rolled in powdered sugar or crumb of bread. If it cannot be taken thus, it may be given under the mask of bouillon, which should be cold.

A Novel Respirator.

A London physician, Dr. Lennox Browne, says the *Chemist and Druggist*, has provided beauty with a climatic apparatus far from unbecoming. This is a veil "of simple blonde, with a border about four inches in depth, of double silk gossamer, sewn along the lower edge." It is made stiff by a very thin wire gauze, which keeps it off the face, and there are minor methods of attachment which a pharmacienne who has passed her examination would best understand.

Alcohol in Phthisis.

The editor of the *Medical Press and Circular* remarks:—

We can call to mind several instances in which the free administration of alcoholic stimulants has had a marked effect in retarding the progress of phthisis, and no doubt there are many practitioners whose experience has led them to form a similar favorable opinion of them. *Appropos* of this question of the utility or not of spirituous or malt liquors in phthisis,

it has been supposed that publicans are peculiarly exempt from this disease. Many years ago, Dr. Atkinson, physician to the Wakefield Dispensary, published some observations on the "Comparative Exemption of Publicans from Phthisis," in which he showed a general mortality in the above town, among adults, from phthisis, of rather less than 1 in 3, and in publicans 1 in 12½. "Now," he says, "allowing great latitude for mistakes, still the mortality by phthisis in publicans is comparatively small. What a more extensive investigation would prove it would be difficult to say, but there is here sufficient to demand further inquiries."

Spiritualism and Insanity.

Dr. W. B. Carpenter, in his lectures on Spiritualism, delivered at the London Institution, insisted that, in the inquiry into the so-called phenomena and facts of spiritualism, nobody was to be trusted; that almost everything in it must be the result either of deception or self-deception, and that there was an immense difference between the fact itself and the observer's idea of the fact. In conclusion, he said that these investigations were calculated to produce insanity, because insanity was nothing more than the possession of a fixed idea which tintured everything with which we have to deal.

Action of Anæsthetics on Muscles and Nerves.

M. Couly, of Paris, finds that when animals are killed by chloroform, ether, or chloral, the muscles and motor nerves retain their irritability much longer than when death is produced by bleeding, compression of the heart, or asphyxia. This is especially marked in the case of chloral. The author considers the cause of this phenomenon to consist, not in any action of the anæsthetics on the spinal cord, but in a direct modification of the nerves and muscles by them through the blood, similar to that which occurs in poisoning by carbonic oxide.

Petroleum for Baldness.

The London *Pall Mall Gazette* states that Mr. Stevens, English consul at Nicolaef, mentions in his last report that among his servants was one prematurely bald, whose duty it was to trim lamps; he had a habit of wiping his petroleum-besmeared hands in the scanty locks which remained to him; and after three months of lamp-trimming experience, his dirty habit

procured for him a much finer head of glossy black hair than he ever possessed before, in his recollection. Struck by this remarkable occurrence, Consul Stevens tried the remedy on two retriever spaniels that had become suddenly bald, with wonderful success. His experience, therefore, induced him to suggest it to the owner of several black cattle and horses affected with a loss of hair, and while it stayed the spread of the disease among animals in the same sheds and stables, it effected a quick and radical cure on the animals attacked. The petroleum should be of the most refined American quality, rubbed in vigorously and quickly with the palm of the hand, and applied at intervals of three days, six or seven times in all, except in the case of horses' tails and manes, when more applications may be requisite.

The Oleate of Bismuth.

At a late meeting of the British Pharmaceutical Society, Mr. Beatty recommended an oleate of bismuth, containing 20 per cent. of the metal, as a useful soluble salt. Its preparation he thus described:—The oxide of bismuth, B. P. (the trisnitate and carbonate being useless for this purpose), is ground very fine, and the oleic acid gradually incorporated with it. The mixture, being placed in a suitable vessel, is subjected to a temperature of nearly its boiling point, then allowed to digest, with frequent agitation, at a temperature of about 60° during four days, or until it solidifies. The result is pharmaceutically a plaster, chemically an oleate of bismuth.

The Treatment of Atheromatous Cysts of the Neck.

Esmarch recommends in those forms of atheromatous cysts of the neck which can only be removed with difficulty, or with the formation of a large cicatrix, puncture of the sac, the injection of a one per cent. solution of carbolic acid, until the solution returns clear, and then the injection of a solution of a Lugol's solution, containing about three per cent. of iodine, and iodide of potassium in water, which he allows to flow out again after the lapse of a few minutes. If the tumor have not considerably diminished in size in the course of six or eight weeks the operation is repeated. In the course of half a year the cyst is usually reduced to the size of a small node.

CORRESPONDENCE.

The General Pathology of Asthma.

ED. MED. AND SURG. REPORTER:—

In Nos. 1022 and 1023 of the MEDICAL AND SURGICAL REPORTER, there is a long article on the above subject, by Dr. C. W. Cram, of Scranton, in which he attempts to prove that in asthma we have paralysis of the pneumogastric nerves, producing elongation and dilatation of the bronchial tubes, with a loss of the contractile power of the air cells. He fails to see "in the assumed spasm of the circular fibres of the bronchial tubes any adequate cause for the leading phenomena of an asthmatic paroxysm," and against the spasm theory he asks to be allowed to present the "facts" which have influenced his mind.

The first argument which is advanced is, that "the trouble is not in getting air into the lungs, but in getting air out of the lungs." This is "evidently from a loss of power on the part of the forces concerned in the action," but where are the "facts" which prove that it is due to paralysis of the expiratory forces instead of obstruction met with in expiration. Second. He holds "that while the inspiratory muscles are all acting forcibly, there is no deficiency, but an excess of air present," and that "the feeling of impending suffocation is not from a want of oxygen, but from an excess of carbonic acid present." Now the feeling of suffocation is but an exaggeration of the "respiratory sense," or that "want on the part of the system which induces the respiratory movements." That this is due to the presence of carbonic acid in the lungs is the theory of Marshall Hall, who believed that the respiratory sense is located in the lungs, is due to the accumulation of carbonic acid, and is carried to the medulla oblongata by the pulmonary branches of the pneumogastric nerves. But there are facts in physiology and pathology which disprove this view. In some cases of heart disease, where the lungs are unaffected but the system poorly supplied with arterial blood, the sense of suffocation is very distressing. So, some have supposed that the respiratory sense is located in the right side of the heart, and is due to its distention with venous blood. John Reid believed it was due to the circulation of venous blood in the medulla oblongata. But in 1841 Volkman proved that the sense of want of air originated in the tissues, and he believed it was due to a deficiency of oxygen, though his experiments did not prove it. He showed that the impression was conveyed to the medulla oblongata, not by the pneumogastrics alone, but principally by the nerves of general sensibility. He found, after division of these nerves, that if the animal was deprived of air, it made violent efforts at respiration. He also found that respiratory efforts continued for quite a number of minutes after extirpation of both lungs.

Dr. Flint, Jr., has made this point the subject of experimental study, and arrived at the same

conclusion. He finds that if the chest of an animal be opened, and artificial respiration be carried on properly, the animal will make no efforts at inspiration, but if the artificial respiration be interrupted, the respiratory muscles are thrown into action, and the animal makes regular, and at last violent, efforts at inspiration. If an artery be exposed, it will be found that the efforts begin when the blood begins to be dark; then if artificial respiration be resumed, the efforts cease as soon as the blood becomes red again. But if while artificial respiration is carried on perfectly, an artery be opened and the system be drained of blood, the animal soon makes respiratory efforts, which become more and more violent, until, just before death, they terminate in convulsions. The same result follows when a ligature is applied to the aorta. And these results remain the same if both pneumogastrics be divided.

These experiments show that the sense of suffocation felt in asthma is due to a deficiency of oxygen in the tissues, and not to an accumulation of carbonic acid in the lungs, and we see how unphilosophical the doctor's reasoning is when he makes such statements as the following: "Now, as the arterial blood supplies the oxygen for the use of the tissues, and as this blood is circulating in much less quantity than in health, it follows that the amount of oxygen called for is equally less." He then goes on to argue that the chief expiratory force lies not simply in the elasticity of lung tissue, but in the motor property of the muscular fibres of the trachea, bronchi and air cells; that in paralysis of this force, the muscles of inspiration having lost their normal antagonizing force, are allowed to assume a condition of extreme contraction, hence the extreme chest expansion of asthma. The paralysis of the longitudinal and circular muscular fibres of the bronchi gives rise to elongation of these tubes, and allows them to bend upon themselves, producing the characteristic wheezing.

Now this is certainly an ingenious theory, but is it true? That the contractility of the pulmonary structure is the chief expiratory force used in ordinary respiration is doubtless true; it is also true that in emphysema we have a loss of this contractile force, for in extreme cases, after death, the lungs will protrude from an opening in the chest instead of collapsing, as they do in health. The experiments of Carson show that if a U tube be partly filled with water and one end introduced into the trachea of an animal just killed, and secured by a ligature, and the chest then opened, that the contractile force was equal, in the dog, calf and sheep, to a column of water from twelve to eighteen, and in the cat and rabbit, six to ten inches high. Therefore the normal contractile force of the pulmonary structure is believed to be the principal force used in ordinary passive expiration, by the great majority, if not all of the physiologists of the present day.

Dr. Cram believes that the bronchial muscular fibres contract with each expiration, which may

be true, although, in a foot-note on page 384 of Flint's "Human Physiology," Vol. I, it is positively stated that these bronchial contractions do not take place in the physiological phenomena of expiration. But if asthma be due to paralysis it must, in the majority of cases, be temporary, and as such I know of no analogous condition. Paralysis due to central disease is never temporary, and reflex paralysis requires for its production a continual irritation for a length of time, and when it is produced it continues more or less until the irritation is removed, while temporary spasm is of very common occurrence.

Reference is made to pertussis and pleuritis, the doctor holding that in the first we have spasmodic action of the expiratory pulmonary apparatus, and that the fact that in this disease the chest walls are carried as far below the level of ordinary expiration as they are above ordinary inspiration in asthma, it follows that they cannot both be due to the same cause, but to opposite conditions.

In pertussis, according to Dr. Copeland, who has made numerous post-mortem examinations in this disease, the parts most constantly found altered are the mucous coverings of the epiglottis, trachea, and bronchi, and of the pharynx, and œsophagus, and as regards the nervous system, the medulla oblongata, and its membranes; together with these changes there is an over-sensitive condition of the membrane covering the upper air passages, rendering them morbidly sensitive to impressions, and as it is one of the functions of the nerves which supply these parts to guard against the entrance of foreign bodies, we have, as the result of this, from the least possible irritation, violent reflex action of, not simply the pulmonary apparatus, but all the expiratory muscles, while in asthma the parts involved are the smaller bronchial tubes, and the pathology so different that I fail to see the force of the doctor's reasoning. In pleuritis the chest movements are impaired, and the respiration feeble, simply because the distention of the lung, produced by a full inspiration, stretches the pulmonary pleura, produces friction of its surface against the costal pleura, and gives the patient so much pain that he instinctively holds the affected side of the chest as motionless as possible.

Then, under the head of therapeutics, we are told that the mode in which ether, nitrite of amyl, and I suppose we may include chloroform, relieve asthma, is by paralyzing the inspiratory muscles, thus restoring the lost equilibrium, and in time allowing the expiratory pulmonary apparatus to regain its tone.

This is another ingenious explanation, but is it rational? Have we any evidence that ether or chloroform will paralyze one set of muscles more than another; and would it not be much more philosophical to suppose that if we have in a given case paralysis of the expiratory forces, and we use an agent which will paralyze the inspiratory forces, the result will be no respiration whatever?

While reading the doctor's article, I was curious to know how the effects of division of the pneumogastric nerves was to be explained, because, if in asthma we have for its cause paralysis of these nerves, then their division should give rise to the same phenomena; if the peculiar adventitious sounds heard over the chest in asthma are due to elongation and doubling of the bronchial tubes, consequent upon paralysis of their muscular fibres, then division should give rise to the same adventitious sounds; but this subject is dismissed by the statement that "when this vivisection has been performed on a dog or cat, the condition which follows is apparently identical with what we see in a paroxysm of asthma."

I cannot think that the doctor is dishonest in this statement, but if not, he must be sadly misinformed. Prof. Flint says that "when both nerves are divided in full-grown dogs, an experiment which we have often repeated, the effect upon the respiratory movements is very marked; for a few seconds the number of respiratory movements may be increased; but as soon as the animal becomes tranquil, the number is very much diminished, and the movements change their character. The inspiratory acts become unusually profound, and are attended with excessive dilatation of the thorax. The animal is generally quiet and indisposed to move. We have seen, under these conditions, the number of respirations fall from sixteen or eighteen to four per minute. Now is this "apparently identical with what we see in a paroxysm of asthma?" Four unusually profound respirations in a minute are very different from the respirations of asthma. To have a succession of profound inspirations we must have expirations equally deep. Besides, no reference is made to the wheezing, which is so characteristic of asthma, nor can I find it mentioned by any physiologist that I have been able to read, as ever occurring under these circumstances.

I do not know that auscultation has ever been practiced after division of these nerves; so to settle this point beyond any doubt in my own mind, I took, on November 1st, a medium sized healthy dog, and divided both pneumogastrics. The effect was precisely as stated by Professor Flint; at first the respirations were accelerated for a short time, but in thirty minutes they fell to from eight to ten per minute, in one hour six to eight, two hours five to six, four hours, when the animal lay quietly upon the floor, the respirations were four per minute. The inspirations were attended with extreme dilatation of the chest, but were immediately followed by expirations which were perfectly easy and equally profound. I kept this dog about my office for the next four days, and repeatedly listened to the respiratory sounds over the animal's chest, but was unable to distinguish any abnormal sound whatever, until on the fourth day there began to be indications that hepatization was taking place in the lower lobes. There was never any wheezing or any bronchial râles of

any character, nor did the breathing resemble that of asthma in the least. Is it "clear," then, that asthma is due to paralysis of the pneumogastrics?

REED BURNS, M. D.
Honesdale, Pa., November 16, 1876.

Cholemia.

ED. MED. AND SURG. REPORTER:—

In September of last year I was summoned twenty miles to see Mr. F. J. W., in consultation with Drs. B. and C. Mr. W. had inhaled five pounds of chloroform—one a day—for clonic spasms, other remedies failing to give relief. He had previously suffered three days, in a similar manner, and came through safely on the same treatment.

On the morning of the fifth day, without indication of asphyxia, or other premonitions, the body assumed a dark icterus hue; the pulse began to flag, and a speedy dissolution appeared imminent. When I arrived in the evening no hope remained to physicians or friends.

Discontinuing the chloroform, we increased the brandy and beef tea, his support during the day, adding am. carb. to the brandy. His writhing and screaming were terrible for a few hours, after which the spasms began to abate, the pulse to rally, and before morning he could speak, and the danger was past. It was many days before natural color returned, and health was restored.

Was chloroform the cause of the jaundice? If not, what was the cause? Could it have been from hepatic hemorrhage? The patient had been drinking freely, to which I largely attributed the trouble, yet no *mania a potu*.

Osage, Iowa.

S. B. CHASE, M. D.

News AND MISCELLANY.

Cremation.

At the last meeting of the Dresden Society for Incineration, 'Urne,' it was announced that at the Brussels Exhibition of Hygienic and Life Saving Apparatus, the gold medal was awarded to the Siemens system. It was also announced that for the erection of an incinerating furnace in Saxe-Gotha, preparations for which have already been made, considerable contributions have been received. The agitation on behalf of incineration, it was stated, is making slow but steady progress in other countries.

Another Death from Ether.

In Rahway, N. J., on January 5th, Dr. Westlake administered ether to Walter Lewis, aged twelve years, in order to extricate a tooth, and fifteen minutes afterward the boy was dead. It is believed that death resulted from an irregularity of the heart, as the ether administered was not enough to render him entirely unconscious. Dr. Westlake is prominent in his profession in Rahway.

A Noteworthy Operation.

Last week, at the Pennsylvania Hospital, Dr. R. J. Levis performed extirpation of the rectum for epithelial cancer. Three inches of the entire diameter of the rectum was removed, including the sphincter and anus. One straight incision was made from the coccyx along the raphé of the perineum, the rectum was dissected from the urethra, prostate and base of the bladder, drawn down and excised. Less than an ounce of blood was lost, and the patient, at last accounts, was doing well.

This is, we believe, the third time this operation has been performed in America, although Billroth of Vienna, has familiarized it to the German profession. We shall endeavor to present a full history of the case before many weeks.

The Relation of Mortality to Race.

From last year's Mortality Reports of Providence, Rhode Island, it appears that the rate of mortality in the population of the city, according to parentage, was as follows, for the two years 1875 and 1876, the population being reckoned at 100,675, according to the census of 1875:—

Population of	1876	1875
American parentage, one death in....	54.1	51.8
Irish parentage, one death in.....	52.8	53.7
English and Scotch parentage, one death in.....	68.3	51.8
German parentage, one death in.....	58.5	61.4
Other foreign parentage, one death in	39.2	48.9
Total foreign parentage, one death in	54.0	53.3

Personal.

—Dr. R. M. Bateman, of Cedarville, N. J., delivered the oration at the reunion of Prof. Sherman's pupils of 51-53, in the First Presbyterian Church, of Bridgeton, Dec. 27th, 1876. The occasion was one of great interest.

—An ingenious doctor, of the name of Janssen, having forsaken the practice of the Healing Art for the study of the Heavens, is busily engaged in putting the finishing touches to an "Automatic Photographic Revolver," which is designed to take photographs of the Sun once every hour in the course of each day.

—Laura Bridgman, the poor creature whom Dr. S. G. Howe rescued from the terrible isolation of blindness and deafness, and whose story Dickens told with such enjoyment, is now 47 years old. A writer in the Congregationalist describes her as good looking, and as very industrious, in spite of her blindness, knitting, crocheting, reading, writing, sewing, and doing very well as a pianist.

—Mrs. Hester Artis, of Kent county, Delaware, died December 26th, aged 116 years, 7 months and 1 day. She was born at Jamestown, Virginia, and the record of the date of her birth is preserved in a family Bible.

Small-pox in London.

LONDON, January 10.—According to the Registrar General's return the deaths from small-pox rose last week to one hundred and sixteen against seventy-five the previous week. The metropolitan hospitals contained eight hundred and fifty-nine small-pox patients on Saturday last, against eight hundred and twenty-three the previous Saturday. About two hundred cases were refused admission during the week, all available beds being occupied.

QUERIES AND REPLIES.

Chronic Diarrhœa.

Dr. B. Segnitz, of N. Y., commends, in these cases, the decoctum hæmatoxyli, a tablespoonful every two hours.

Digitalis.

Dr. J. D., of Mo.—"Is digitalis a cardiac tonic or a cardiac sedative?"

Ans.—Digitalis reduces the frequency but not the force of the heart; as a true sedative it does not compare with aconite or veratrum viride. It becomes a tonic by indirect action. See the subject fully discussed in Naphey's *Modern Therapeutics*, 4th ed. pp. 212, 213, 222, 223, etc.

Incompatibles.

Dr. A. P. J., of N. Y.—"I was taught that sulphate of quinine and carbonate of ammonia are incompatible, and ought never to be administered in combination. Is this so?"

Ans.—They are chemically incompatible; the mixture forms sulphate of ammonia and free quinine.

MARRIAGES.

BUCKLEY—MONTGOMERY.—On December 27th, by Rev. George D. Boardman, D. D., Helen M. Buckley and E. E. Montgomery, M. D., all of this city.

MATHEWS—SCOTT.—In this city, December 25th, by the Rev. L. B. Hartman, Abel J. Mathews, M. D., of Chalfont, Bucks county, Pa., and Ella Scott, of Philadelphia, daughter of the late Joseph Scott, Esquire.

MILLER—HUSTON.—On the 12th ultimo, at the residence of the bride's parents, by Friends' Ceremony, Benjamin Miller, and Clara, daughter of Dr. Charles Huston, all of Coatesville, Pa.

MILLIGAN—PINKERTON.—On Monday, October 24, 1876, by Rev. W. M. Ingersoll, John S. Milligan, M. D., and Mrs. Mat. J. G. Pinkerton, both of Westmoreland County, Pa.

WORTHINGTON—COLLINS.—At the house of Hannah W. Collins, 52 west Twenty-second street, New York, by appointment of New York Monthly Meeting of Friends, Dr. Joshua H. Worthington, of this city, and Sarah, daughter of the late Stacy B. Collins, of the former place.

DEATHS.

APPLEY.—At Cohecton, Sul'ivan Co., N. Y., Jan. 6th, William L. Appley, M.D., aged 65 years.

Bogg.—In New York, on Friday, Dec. 22d, 1876, Martin Bogg, M. D.

BRIDGHAM.—In Boston, Mass., at the City Hospital, 8th inst., Jairus G. Bridgham, House Physician, aged 21 years, 7 months.

CARSON.—In this city, Joseph Carson, M. D., on the 30th ultimo, in the sixty-ninth year of his age.

MALIN.—On the 27th ultimo, Mrs. Mary C. Malin, wife of Dr. John Malin, in the 27th year of her age.